Stantec Analytical Validation Checklist

	110port 110.711 020
Project Name: Amtrak North Yard	Project Number: 213402048
Validator: Jim Tezak	Laboratory: Eurofins/Lancaster Laboratory
Date Validated: 11/27/2018	Laboratory Project Number: 1814579
Sample Start-End Date: 6/16/2017	Laboratory Report Date: 7/24/2017

Report No. ATG20

Parameters Validated:

Polychlorinated biphenyls (PCBs) by EPA SW-846 3550B/8082A - solid matrix

Percent Solids by SM 2540 G

Samples Validated (all Grab Soil):

E-6(5.5-5.8), LLI # 9054527

E-6(6.0-6.3), LLI # 9054528

E-6(6.5-6.8), LLI # 9054529

F-5(0.0-0.3), LLI # 9054530

F-5(0.5-0.8), LLI # 9054531

F-5(1.0-1.3), LLI # 9054532

F-5(1.5-1.8), LLI # 9054533

F-5(2.0-2.3), LLI # 9054534

F-5(2.5-2.8), LLI # 9054535

F-5(3.0-3.3), LLI # 9054536

F-5(3.5-3.8), LLI # 9054537

F-5(4.0-4.3), LLI # 9054538

F-5(4.5-4.8), LLI # 9054539

F-5(5.0-5.3), LLI # 9054540

F-5(5.5-5.8), LLI # 9054541

F-5(6.0-6.3), LLI # 9054542

F-5(6.5-6.8), LLI # 9054543

F-6(0.0-0.3), LLI # 9054544

F-6(0.5-0.8), LLI # 9054545

F-6(1.0-1.3), LLI # 9054546

VALIDATION CRITERIA CHECK

Validation Flags Applicable to this Review:

- **U** The analyte was analyzed for, but not detected above the reported sample quantitation limit.
- **J** The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
- **J+** Result is estimated quantity but the result may be biased high.
- **J-** Result is estimated quantity but the result may be biased low.
- **UJ** The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
- **NJ** The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.
- **B** The analyte was detected in the method, field, and/or trip blank.
- **R** The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

1.	Were all the analyses requested for the samples submitted with each COC completed by the lab?		Yes X	No
Cor	mments:			
2.	Did the laboratory identify any non-conformances related to the analytical result?		Yes	No X
Cor	mments:			
3.	Were sample Chain-of-Custody forms complete?		Yes X	No
	mments: mples were listed on two chains-of-custody (COCs), COC #'s	s 534153 and \$	534165.	
4.	Were samples received in good condition and at the appropriate temperature?		Yes X	No
The	mments: e laboratory noted on the Sample Administration Receipt Doo tainer was not sealed and there was no custody seal preser			•
5.	Were sample holding times met?		Yes X	No
Cor	mments:			
6.	Were correct concentration units reported?		Yes X	No
	mments: sults for all soil samples were reported in units of milligrams	per kilogram (r	ng/kg).	
7.	Were detections found in laboratory blank samples?		Yes	No X
Cor	mments:			
8. blaı	Were detections found in field blank, equipment rinse nk, and/or trip blank samples?	NA X	Yes	No
•••	mments: field blanks were submitted in this sample delivery group (Sl	DG).		
9.	Were instrument calibrations within method criteria?	NA X	Yes	No
	mments: Applicable, Level 2 data validation.			

10. Were surrogate recoveries within control limits?	Yes	No		
		Х		
Comments:				
High percent recoveries (%Rs) were reported for the surrogate decachlorobiph	• ,	•		
F-5(1.0-1.3) (DCB=226%), F-5(1.5-1.8) (DCB=244%), F-5(2.0-2.3) (DCB=181° (DCB=163%), F-5(3.0-3.3) (DCB=155%), F-5(3.5-3.8) (DCB=153%), F-6(0.5-0.000)				
6(1.0-1.3) (DCB=170%). These recoveries resulted from high sample dilution				
(dilution factor=50X or greater); therefore, no corrective action was required. I	No data were qu	ualified since		
the surrogates were diluted out.				
The %R for DCB in the sample F-5(0.0-0.3) (45%) was below the internal laborable. 125%, but was within the control limits of 30-150% published in the 2014 USE				
Guidelines (NFGs) for Superfund Organic Methods Data Review. Since the si				
within the control limits in the NFGs, no data were qualified.				
11. Were laboratory control sample(s) (LCS/LCSD) sample	Yes	No		
recoveries within control limits?	X			
Comments:				
12. Were matrix spike (MS/MSD) recoveries within control NA	Yes	No		
limits?		X		
Comments:				
The sample F-6(3.5-3.8) from SDG ATG21 was analyzed as the site-specific Nobatch 171950017A. The sample E-6(6.5-6.8) was analyzed as the site-specific in batch 171950024A. All percent recoveries (%Rs) were within control limits.	c MS/MSD for s			
The sample F-5(0.0-0.3) was analyzed as the site-specific MS/MSD for soil sa The %Rs for the spike for Aroclor 1016 in the MS (49%) and MSD (38%) was	mples in batch			
laboratory control limits of 80-121%, but were within the control limits of 29-13	5% published in	the 2014		
USEPA NFGs. Since the spike recoveries were within the control limits in the qualified. The %R for the spike for Aroclor 1260 in the MSD (126%) was below				
control limits for 84-125%, but was within the control limits of 29-135% publish				
NFGs. The %R for Aroclor 1260 in the MS (11%) was below the control limits	in the 2104 USI	EPA NFGs.		
The result for Aroclor 1260 in the parent sample was considered estimated an	d qualified as J	based on		
the low spike recovery in the MS. Reason Code: MS.				
13. Were RPDs within control limits?	Yes	No		
10. Were IX B3 within control minus:	103	X		
Comments:				
	d control limits r	nublished in		
For the sample F-5(0.0-0.3), RPDs between the MS/MSD recoveries exceeded control limits published in the 2014 USEPA NFGs for Aroclor 1016 and Aroclor 1260. For Aroclor 1016, the RPD was 24, which				
exceeded the upper control limit of 15. Since Aroclor 1016 was not detected in				
data qualification was required for the high RPD. For Aroclor 1260, the RPD the upper control limit of 20. The result for Aroclor 1260 in the parent sample				
and qualified as J based on the high RPD.	was considered	Commuted		

Comments:

Reason Code: MS/SD.

14. Were dilutions required on any samples?

Ten samples required dilution prior to analysis, with dilution factors ranging from 5X to 500X. Sample reporting limits were adjusted accordingly. No data were qualified.

Yes

Χ

No

15.	Were Tentatively lo	dentified Compounds (TIC) pre	esent? NA X		Yes	No
Con	nments: TIC not requ	uested.				
16.	Were organic syste	em performance criteria met?	NA X		Yes	No
	nments:					
Not	Applicable, Level II	data validation.				
17.	Were GC/MS inter	nal standards within method cr	iteria? NA X		Yes	No
Con	nments:					
Not	Applicable, Level II	data validation.				
18.	Were inorganic sys	stem performance criteria met?	P NA		Yes X	No
Con	nments:					
	Were blind field du cision (RPD) of the re	plicates collected? If so, discuesults.	iss the		Yes	No X
Dup	olicate Sample ID	Primary Sa	mple No.			
qua	lity, usability, or com	were submitted with this SDG pleteness. Completeness with sed on an overall program-wide	regard to collection			
20. the	Were at least 10 po Electronic Data Deliv	ercent of the hard copy results verable Results?	compared to	Yes X	No	Initials KEF
Con	nments:					
21.	Other?				Yes	No X
All s		ed according to the USEPA 20 alified. No data have been rej		EC SOPO	CAP. All da	
	PRECISION, ACC	URACY, METHOD COMPLIA	NCE AND COMPL	ETENESS	SASSESSI	MENT
Pred	cision:	Acceptable	Unacceptal	ole	Initials	
Con		X			JET	
COII	nments:	Х			JEI	
	nments:	X Acceptable X	Unacceptal	ole	JE I Initials JET	

Accuracy:	Acceptable X	Unacceptable	Initials JET		
Comments:	Comments:				
Representativeness:	Acceptable X	Unacceptable	Initials JET		
Comments:					
Method Compliance:	Acceptable X	Unacceptable	Initials JET		
Comments:					
Completeness:	Acceptable X	Unacceptable	Initials JET		
Comments:					